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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,195	02/20/2004	Mou-Shiung Lin	MS98-002CCC CIPB	6169

7590 10/03/2006

George O. Saile  
28 Davis Avenue  
Poughkeepsie, NY 12603

EXAMINER
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LE, THAO X

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 10/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/783,195

Applicant(s)

LIN ET AL.

Examiner

Thao X. Le

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 94-100, 102, 105-110, 112-116, 119, 120, 123, 126-129, 131 and 136-140 is/are pending in the application.
- 4a) Of the above claim(s) 94-100, 102 and 105 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 106-110, 112-116, 119, 120, 123, 126-129, 131 and 136-140 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 106-110, 112-116, 119-120, 123, 126-129, 131, and 136-140 are rejected under 35 U.S.C. 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over US 2003/0102551 to Kikuchi.

Regarding claims 106, 120, and 136 Kikuchi discloses a semiconductor chip or wafer in fig. 2 comprising: a silicon substrate 110 [0030] (semiconductor comprises silicon), metallization structure 120 [0038], over said silicon substrate 110; a passivation layer 130 [0039] over said metallization structure 120; wherein an opening in said passivation layer 130 exposes a first contact pad of metallization structure 120, and wherein said passivation layer 130 comprises an inorganic material [0039]; and a metal trace 160 [0043], over part of said passivation layer 130 and over said first contact pad 120, fig. 2, wherein said metal trace 160 comprises a gold layer with a thickness of between 2 and 100  $\mu\text{m}$  [0043], wherein said metal trace 160 comprises a second pad

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(where 170 is located), fig. 2, connected to said first pad, wherein the positions of said first and second contact pads from a top view are different, fig. 1.

With respect to "second contact pad is used to be wirebonded thereto" does not provide a structural limitation, but it is rather defining the second pad is capable of having or receiving a wirebonded thereto. Thus, the second pad of Kikuchi would have the same capability as claimed.

Regarding claims 107-109, 126-128, Kikuchi discloses the semiconductor chip wherein passivation 130 comprises a topmost nitride or oxide layer of said semiconductor chip or wafer [0039]

With respect to "wherein said passivation layer 4 comprises a topmost CVD-formed layer" is considered to be a process that does not carry weight in a claim drawn to structure. In re Thorpe, 277 USPQ 964 (Fed. Cir. 1985).

Regarding claim 110, Kikuchi discloses the semiconductor chip or wafer wherein said metal trace 160 further comprises a titanium-containing layer 150 [0042].

Regarding claims 112-115, 137-138, Kikuchi discloses the semiconductor chip or wafer wherein said second contact pad is used to be wirebonded thereto, and further comprising a metal bump 170 or solder bump 190 [0043] and [0046] over said second pad, fig. 2.

With respect to "second contact pad is used to be wirebonded thereto" does not provide a structural limitation, but it is rather defining the second pad is capable of having or receiving a wirebonded thereto. Thus, the second pad of Kikuchi would have the same capability as claimed.

Regarding claim 116, Kikuchi discloses the semiconductor chip or wafer further comprising a topmost polymer layer 140 [0040] over the passivation layer 130, wherein said metal trace 160 is over said topmost polymer layer 140, fig. 2.

Regarding claims 119, 123, 129, 131, and 140, Kikuchi discloses the semiconductor chip or wafer further comprising a polymer layer 140 over said passivation layer 130, wherein said second contact pad is over said polymer layer, fig. 2, wherein the metal trace comprises gold.

The process limitations "electroplated" and wirebond in claims 129 and 131 do not carry weight in a claim drawn to structure. In re Thorpe, 277 USPQ 964 (Fed. Cir. 1985).

Regarding claim 139, Kikuchi discloses the semiconductor chip or wafer wherein said metal trace 160 comprises a titanium-containing layer 150 [0042] under said gold layer 160, fig. 2.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 106-110, 112-116, 120,123, 126-129, 131, and 136-140 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao X. Le whose telephone number is (571) 272-1708. The examiner can normally be reached on M-F from 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael M. Fahmy can be reached on (571) 272 -1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

27 Sept. 2006

A handwritten signature in black ink, consisting of a large, sweeping loop followed by a vertical line and a horizontal stroke.

**THAO X. LE**  
**PRIMARY PATENT EXAMINER**